



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,542	01/27/2004	Tadao Nojiri	11-218	2371
23400	7590	05/04/2005	EXAMINER	
POSZ LAW GROUP, PLC 12040 SOUTH LAKES DRIVE SUITE 101 RESTON, VA 20191			LE, THIEN MINH	
		ART UNIT	PAPER NUMBER	
			2876	

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

N/A

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/764,542	NOJIRI, TADAO	
	Examiner Thien M. Le	Art Unit 2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 13-26 is/are allowed.
- 6) Claim(s) 1 and 7 is/are rejected.
- 7) Claim(s) 2-6 and 8-12 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 27 January 2004 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

## DETAILED ACTION

The priority document and the information disclosure statement both filed on 1/27/2004 have been entered. Claims 1-26 are presented for examination.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
- (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Rubin et al. (herein after referred as Rubin – 6,601,772).

Rubin discloses a "two-dimensional matrix code, method of producing the code and a method and device for reading the code are presented. The code is a round, compact and distinct code that stores an error-corrected 64-bit number, embedded targets, and quality control information within a space small enough for imaging using a compact, hand-held code finder. The code incorporates white space both between the data areas and targets for easy identification of the code and to aid in image processing, and within the data area to correct for errors that sometimes occur when printing using low-quality techniques. Additionally, the code includes features to correct for other printing errors, such as variations in printing press speed and intentional aspect ratio stretching to fill copy space. The code is thus robust enough to be incorporated within newsprint and is also easily imaged using specially constructed code finders. A code finder device and a method of using the finder for acquiring a code of the present invention is also presented. The finder is portable and easy to use, requiring no rotational orientation for correct acquisition. Several embodiments are described, in which the finder contains illumination and communications electronics and means to notify the user of correct operation of the finder".

Figure 3 of Rubin shows an enlarged detail of the matrix code. According to Rubin, the Code 101 is a pattern of two optical properties which appears on FIG. 3 as a printed pattern ("black") on a background ("white"). In a preferred embodiment, the code printed using black ink on a light background having optical

properties that are measurably different from the black ink. In general, the term black and white are used to denote two states in a general way, as describe previously.

Code 101 includes three curved black targets 301 surrounded by reserved white space 305 and hexagonal cells 303 laid out on a close-packed hexagonal grid and storing data according to the location and optical properties of individual cells, additional targeting information and quality control information. Data is encoded according to the shading of some of cells 303, with figure 3 showing the code for arbitrarily, though representative, coded information.

Figure 4 shows a specification 401 of the assignment of space and optical properties for one embodiment of the matrix code 101. The position and color of previously described targets 301 are shown as coarse target 403. Other features of the code are arranged on a hexagonal, close-packed grid 419 including: multiple black fine targets 407; a plurality of hexagonal data cells 411 with individual cells numbered as shown and which may be either black or white; multiple reserved white space 405 that is embedded within the data cells; reserved white space 409 that separates the coarse targets from the data cells (shown as white space 305 in FIG. 3); and a quality control cell 413 that can be black, white, or possibly other colors and can be solid or patterned as described below. Code features 403 to 413 are contained within a circular perimeter 415.

As can be seen, Rubin disclose a two dimensional code (figure 4) comprising a plurality of unit cells (403, 405, 407, 409, 411, and 413) as shown in figure 4.

According to Rubin, the data cells 411 can be one of two colors: black and white. The

quality control cell 413 can be either black, white or other colors. The black fine targets 407 are used to identify the position of the data cells and so forth. Thus, Rubin discloses the claimed invention.

Claim 7 is rejected under 35 U.S.C. 102(e) as being anticipated by Cheong et al. (herein after referred as Cheong – 2005/0001033).

Regarding claim 7, Cheong discloses an “apparatus and method for recognizing a code from a code image that is expressed physically or electronically and extracting data represented in the code image is provided. The method includes the steps of receiving a raw image in which a code image is contained, detecting a background image included in the raw image, extracting a code image region in which a background image is excluded, recognizing the shape and type of the code image and the color or shade represented in each of cells, converting the color or shade recognized from each of the cells into a corresponding character, number, or symbol and generating code data. The code image in which predetermined data are represented as colors or shades are received, and original colors or shades can be precisely discriminated regardless of an environment in which the code image is recognized.” (abstract)

Figures 2A through 2E of Cheong show various examples of code images to be read by the apparatus. Figure 3A through 3C show examples of code conversion tables used to convert predetermined data into an image.

Specifically, Cheong discloses that the code can have various shapes for cells,

for example, quadrangular, circular, elliptical, cross-shaped, or honeycomb shaped.

Various shapes of the code image comprised of a plurality of cells, such as quadrangular, circular, elliptical, cross-shaped, or honeycomb shaped, may be realized, and a code image having a similar shape to a barcode shown in figure 2D.

Figure 2E of Cheong shows a two dimensional code comprising: a parity region 293, a reference region 295, and a control region 297. Figure 3A of Cheong shows a example in which two bits of data are expressed as four colors. According to Cheong, "if each cell has one of four colors, two bits of data can be expressed. Then, in a case where it is defined that one character is expressed as four consecutive cells, 8 bits, that is, 256 kinds of characters can be expressed. Meanwhile, in a case where there are four kind of shapes for a cell with the same color(i.e., small quadrangle, large quadrangle, small circle, and large circle), two bits of data can be expressed, and 256 kinds (8 bits) of data can be expressed in a case where each cell may be filled with four different colors."

As can be seen, Cheong discloses a two dimensional data code including various blocks including a reference block, a parity block, a control block, a data block (figure 2E) and wherein each block contain data bit which can take up different colors as shown in figure 3A. Thus, Cheong discloses the claimed invention.

### ***Allowable Subject Matter***

Claims 13-26 are allowed.

Claims 2-6, 8-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art discloses various two dimensional code having unit.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thien M. Le whose telephone number is (571) 272-2396. The examiner can normally be reached on Monday - Friday from 7:30am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Le, Thien Minh  
Primary Examiner  
Art Unit 2876  
April 27, 2005**